73. (Amended) A thin film transistor comprising:

a crystalline semiconductor island over a substrate having an insulating surface;

source and drain regions in said semiconductor island;

a channel forming region between said source and drain regions:

a gate insulating film adjacent to at least said channel forming region;

a gate electrode adjacent to said channel forming region having said gate insulating film therebetween,

wherein said channel forming region has no grain boundary, and

wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not higher than 5×10^{18} cm^{-3}, and oxygen at a concentration not higher than 5×10^{19} cm^{-3},

wherein said semiconductor island includes a spin density not higher than 1×10^{17} cm^{-3}.

77. (Amended) A thin film transistor according to claim 73 wherein said semiconductor island includes [a] the spin density [of] not lower than 1×10^{15} [to 1×10^{17}] cm^{-3}.

80. (Amended) A thin film transistor comprising:

a crystalline semiconductor island on an insulating surface;

source and drain regions in said semiconductor island;

a channel forming region between said source and drain regions;

a gate insulating film on at least said channel forming region;

a gate electrode over said channel forming region having said gate insulating film therebetween,

wherein said channel forming region has no grain boundary, and

wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not higher than 5 x 10^{18} cm^{-3}, and oxygen at a concentration not higher than 5 x 10^{19} cm^{-3}.

wherein said semiconductor island includes a point defect of 1 x 10^{16} cm^{-3} or more, and one of hydrogen and halogen element for neutralizing the point defect at concentration not higher than 1 x 10^{20} cm^{-3}.

---

83. (Amended) A thin film transistor according to claim 80 wherein said semiconductor island includes [a point defect of 1 x 10^{16} cm^{-3} or more, and] said one of hydrogen and halogen element for neutralizing the point defect at a concentration [of] not lower than 1 x 10^{15} [to 1 x 10^{20}] cm^{-3}.

Please add new claims 87-134 as follows:

--87. A semiconductor device comprising:

a crystalline semiconductor island on an insulating surface;

source and drain regions in said semiconductor island;

a channel forming region between said source and drain regions;

a gate insulating film adjacent to at least said channel forming region;

a gate electrode adjacent to said channel forming region having said gate insulating film therebetween,

wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not higher than 5 x 10^{18} cm^{-3}, and oxygen at a concentration not higher than 5 x 10^{19} cm^{-3},

wherein said crystalline semiconductor island is formed in a monodomain region which contains no grain boundary.

88. A device according to claim 87, wherein said crystalline semiconductor island comprises a material selected from the group consisting of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu, Ag, Au.

F 5 Cont'd

89. A device according to claim 88, wherein said material is included in said semiconductor island at a concentration not higher than 5 x 10^{19} cm^{-3}.

90. A device according to claim 87, wherein said semiconductor island is a silicon island.

91. A device according to claim 87, wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not lower than 1 x 10^{16} cm^{-3}, and oxygen at a concentration not lower than 1 x 10^{17} cm^{-3}.

92. A device according to claim 87, wherein said monodomain region has a grain size of 50 μm or more.

Sub. I4

93. A semiconductor device comprising:

a crystalline semiconductor island on an insulating surface;

source and drain regions in said semiconductor island;

a channel forming region between said source and drain regions;

a gate insulating film adjacent to at least said channel forming region;

F5 Cont'd.

a gate electrode adjacent to said channel forming region having said gate insulating film therebetween,

wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not higher than 5×10^{18} cm^{-3}, and oxygen at a concentration not higher than 5×10^{19} cm^{-3},

wherein said channel forming region is formed in a monodomain region which contains no grain boundary.

94. A device according to claim 93, wherein said crystalline semiconductor island comprises a material selected from the group consisting of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu, Ag, Au.

95. A device according to claim 94, wherein said material is included in said semiconductor island at a concentration not higher than 5×10^{19} cm^{-3}.

96. A device according to claim 93, wherein said semiconductor island is a silicon island.

97. A device according to claim 93, wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not lower than 1 x 10^{16} cm^{-3}, and oxygen at a concentration not lower than 1 x 10^{17} cm^{-3}.

98. A device according to claim 93, wherein said monodomain region has a grain size of 50 μm or more.

F5 Cont'd. Sub H

99. A semiconductor device comprising:

a p-channel thin film transistor;

an n-channel thin film transistor;

each of said p-channel thin film transistor and said n-channel thin film transistor comprising:

a crystalline semiconductor island on an insulating surface;

source and drain regions in said semiconductor island;

a channel forming region between said source and drain regions;

a gate insulating film adjacent to at least said channel forming region;

a gate electrode adjacent to said channel forming region having said gate insulating film therebetween,

wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not higher than 5 x 10^{18} cm^{-3}, and oxygen at a concentration not higher than 5 x 10^{19} cm^{-3},

wherein said crystalline semiconductor island is formed in a monodomain region which contains no grain boundary.

100. A device according to claim 99, wherein said crystalline semiconductor island comprises a material selected from the group consisting of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu, Ag, Au.

101. A device according to claim 100, wherein said material is included in said semiconductor island at a concentration not higher than 5 x 10^{19} cm^{-3}.

F 5 Cont'd

102. A device according to claim 99, wherein said semiconductor island is a silicon island.

103. A device according to claim 99, wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not lower than 1 x 10^{16} cm^{-3}, and oxygen at a concentration not lower than 1 x 10^{17} cm^{-3}.

104. A device according to claim 99, wherein said monodomain region has a grain size of 50 μm or more.

Sub H5

105. A semiconductor device comprising:

a p-channel thin film transistor;

an n-channel thin film transistor;

each of said p-channel thin film transistor and said n-channel thin film transistor comprising:

a crystalline semiconductor island on an insulating surface;

source and drain regions in said semiconductor island;

a channel forming region between said source and drain regions;

a gate insulating film adjacent to at least said channel forming region;

a gate electrode adjacent to said channel forming region having said gate insulating film therebetween,

wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not higher than 5 x 10^{18} cm^{-3}, and oxygen at a concentration not higher than 5 x 10^{19} cm^{-3},

wherein said channel forming region is formed in a monodomain region which contains no grain boundary.

F5 Cont'd

106. A device according to claim 105, wherein said crystalline semiconductor island comprises a material selected from the group consisting of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu, Ag, Au.

107. A device according to claim 106, wherein said material is included in said semiconductor island at a concentration not higher than 5 x 10^{19} cm^{-3}.

108. A device according to claim 105, wherein said semiconductor island is a silicon island.

109. A device according to claim 105, wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not lower than 1 x 10^{16} cm^{-3}, and oxygen at a concentration not lower than 1 x 10^{17} cm^{-3}.

110. A device according to claim 105, wherein said monodomain region has a grain size of 50 μm or more.

111. A semiconductor device including an electro-optical device comprising:

an active matrix circuit portion including at least a first thin film transistor;

a peripheral driving circuit portion including at least a second thin film transistor;

said second thin film transistor comprising:

a crystalline semiconductor island on an insulating surface;

source and drain regions in said semiconductor island;

a channel forming region between said source and drain regions;

a gate insulating film adjacent to at least said channel forming region;

a gate electrode adjacent to said channel forming region having said gate insulating film therebetween,

wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not higher than 5×10^{18} cm^{-3}, and oxygen at a concentration not higher than 5×10^{19} cm^{-3},

wherein said crystalline semiconductor island is formed in a monodomain region which contains no grain boundary.

112. A device according to claim 111, wherein said crystalline semiconductor island comprises a material selected from the group consisting of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu, Ag, Au.

113. A device according to claim 112, wherein said material is included in said semiconductor island at a concentration not higher than 5 x 10^{19} cm^{-3}.

114. A device according to claim 111, wherein said semiconductor island is a silicon island.

115. A device according to claim 111, wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not lower than 1 x 10^{16} cm^{-3}, and oxygen at a concentration not lower than 1 x 10^{17} cm^{-3}.

116. A device according to claim 111, wherein said monodomain region has a grain size of 50 μm or more.

117. A semiconductor device including an electro-optical device comprising:

an active matrix circuit portion including at least a first thin film transistor;

a peripheral driving circuit portion including at least a second thin film transistor;

said second thin film transistor comprising:

a crystalline semiconductor island on an insulating surface;

source and drain regions in said semiconductor island;

a channel forming region between said source and drain regions;

a gate insulating film adjacent to at least said channel forming region;

a gate electrode adjacent to said channel forming region having said gate insulating film therebetween,

wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not higher than 5 x 10^{18} cm^{-3}, and oxygen at a concentration not higher than 5 x 10^{19} cm^{-3},

wherein said channel forming region is formed in a monodomain region which contains no grain boundary.

F5 Cont'd

118. A device according to claim 117, wherein said crystalline semiconductor island comprises a material selected from the group consisting of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu, Ag, Au.

119. A device according to claim 118, wherein said material is included in said semiconductor island at a concentration not higher than 5 x 10^{19} cm^{-3}.

120. A device according to claim 117, wherein said semiconductor island is a silicon island.

121. A device according to claim 117, wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not lower than 1 x 10^{16} cm^{-3}, and oxygen at a concentration not lower than 1 x 10^{17} cm^{-3}.

122. A device according to claim 117, wherein said monodomain region has a grain size of 50 μm or more.

123. A semiconductor device comprising:

a crystalline semiconductor island on an insulating surface;

source and drain regions in said semiconductor island;

a channel forming region between said source and drain regions;

a gate insulating film adjacent to at least said channel forming region;

a gate electrode adjacent to said channel forming region having said gate insulating film therebetween,

wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not higher than 5×10^{18} cm^{-3}, and oxygen at a concentration not higher than 5×10^{19} cm^{-3},

wherein said crystalline semiconductor island is formed in a monodomain region which contains no grain boundary,

wherein said semiconductor device has a S value of 0.03-0.3.

124. A device according to claim 123, wherein said crystalline semiconductor island comprises a material selected from the group consisting of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu, Ag, Au.

125. A device according to claim 124, wherein said material is included in said semiconductor island at a concentration not higher than 5×10^{19} cm^{-3}.

126. A device according to claim 123, wherein said semiconductor island is a silicon island.

127. A device according to claim 123, wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not lower than 1 x 10^{16} cm^{-3}, and oxygen at a concentration not lower than 1 x 10^{17} cm^{-3}.

128. A device according to claim 123, wherein said monodomain region has a grain size of 50 μm or more.

129. A semiconductor device comprising:

a crystalline semiconductor island on an insulating surface;

source and drain regions in said semiconductor island;

a channel forming region between said source and drain regions;

a gate insulating film adjacent to at least said channel forming region;

a gate electrode adjacent to said channel forming region having said gate insulating film therebetween,

wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not higher than 5 x 10^{18} cm^{-3}, and oxygen at a concentration not higher than 5 x 10^{19} cm^{-3},

wherein said channel forming region is formed in a monodomain region which contains no grain boundary,

wherein said semiconductor device has a S value of 0.03-0.3.

130. A device according to claim 129, wherein said crystalline semiconductor island comprises a material selected from the group consisting of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu, Ag, Au.

F5 Cont'd.

131. A device according to claim 130, wherein said material is included in said semiconductor island at a concentration not higher than 5 x 10^{19} cm^{-3}.

132. A device according to claim 129, wherein said semiconductor island is a silicon island.

133. A device according to claim 129, wherein said crystalline semiconductor island includes carbon and nitrogen at a concentration not lower than 1 x 10^{16} cm^{-3}, and oxygen at a concentration not lower than 1 x 10^{17} cm^{-3}.

134. A device according to claim 129, wherein said monodomain region has a grain size of 50 μm or more.--